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☐ 1: Arch Latinoam Nutr 1992 Dec;42(4):409-13

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[Hypercholesterolemic effect of canthaxanthin and astaxanthin in rats]

[Article in Spanish]

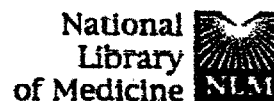
Murillo E.

Departamento de Quimica, Facultad de Ciencias Naturales y Exactas, Universidad de Panama.

Three groups of male Wistar rats (130-140 g) were fed 30 days with a synthetic diets containing 0.1% of beta-carotene, canthaxanthin and astaxanthin respectively. Another group was fed with a synthetic diet without carotenoids. The results shows that the beta-carotene does not induce change in plasma cholesterol (49, 7 +/- 3.6 mg/dl), but canthaxanthin and astaxanthin induce a significant increase in cholesterol concentration (92.1 +/- 3.6 and 66.5 +/- 5.1 mg/dl). This increase is noted mainly in the HDL fraction of the lipoproteins. Canthaxanthin has more affinity than astaxanthin for the liver, principal site of lipoproteins catabolism. The hypercholesterolemic effect of these xanthophylls is not related to reported mechanisms of carotenoids in mammalian, because beta-carotene does not induce changes in plasma cholesterol.

PMID: 1342178 [PubMed - indexed for MEDLINE]

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1: Kokuritsu Iyaku hin Shokuhin Eisei Kenkyusho Hokoku
1999;(117):91-8

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[A 13-week subchronic oral toxicity study of haematococcus color in F344 rats].

[Article in Japanese]

Ono A, Sekita K, Saitoh M, Umemura T, Ogawa Y, Furuya T, Kaneko T, Inoue T.

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A 13-week oral repeated dose toxicity study of haematococcus color, a food additive mainly composed of astaxanthin, was conducted in male and female F344 rats. Rats were randomly divided into 4 groups each consisting of 10 males and 10 females and given CRF-1 powder diet containing 0%, 0.025%, 0.075%, and 0.25% haematococcus color, correspond to 0%, 0.5%, 1.5%, and 5% as the product. None of the animals died during the administration period. There were no exposure-related changes in body weight gain or food consumptions. Serum biochemical examinations showed dose-related increase in cholesterol, but the differences were slight and not defined as an adverse effect. No effects related to treatment were noted in hematological examinations and organ weights, and no abnormalities that could be ascribed to exposure to haematococcus color were observed in histopathological examinations. In conclusion, ingestion of haematococcus color in the diet for 13 weeks does not cause any toxicological changes in F344 rats.

PMID: 10859939 [PubMed - indexed for MEDLINE]

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